

# EUROPEAN PATENT OFFICE

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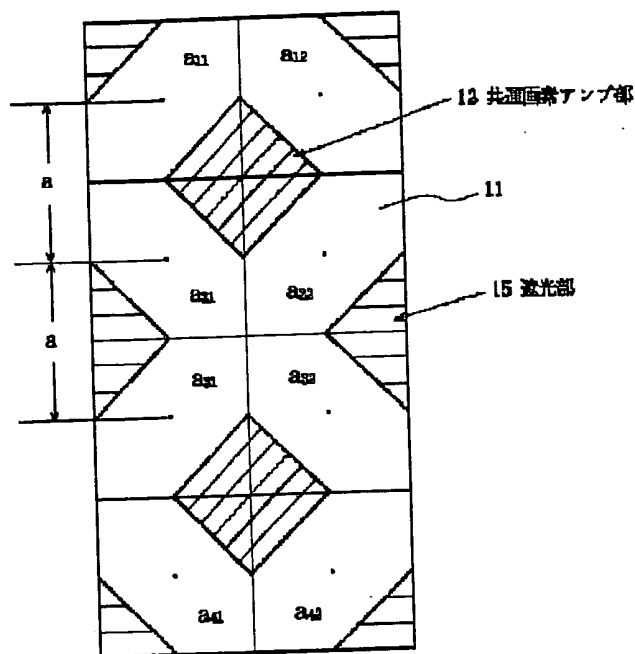
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TITLE : IMAGE-PICKUP DEVICE AND  
IMAGE-PICKUP SYSTEM USING THE  
SAME



ABSTRACT : PROBLEM TO BE SOLVED: To obtain satisfactory performance without lowering resolution, even when plural pixels share one amplifying means by adjusting the pitch of photodetection parts in the center part of a device which processes plural pixel signals to equal pitch in at least one of the horizontal and vertical directions.

SOLUTION: Unit cells are arranged repeatedly in rows and columns by a size of four pixels. Photodiode incident light is converted into electric charges, and stored electric charges are transferred and carried to a MOS amplifier which is an amplifying means, whose output current is taken out of a pixel array by a vertical signal line. A common pixel amplifying part 12 is arranged in the center among four pixels and four photoelectric conversion parts (a11, a12, a21, and a22) are arranged to surround the amplification part. A light-proof parts 15 are placed at the positions, which are center-symmetrical with respect to respective pixel areas where the amplifying part 12 occupies, and the four photoelectric conversion part (a11 to a22) are arranged longitudinally and laterally at equal intervals (a). Consequently, moire fringes are prevented from being formed, and the numerical aperture is improved.

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